

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
28 June 2001 (28.06.2001)

PCT

(10) International Publication Number  
WO 01/46199 A1

(51) International Patent Classification<sup>7</sup>: C07D 498/04,  
A61K 31/47, A61P 35/00, 43/00

(21) International Application Number: PCT/US00/32443

(22) International Filing Date:  
11 December 2000 (11.12.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/171,373 22 December 1999 (22.12.1999) US  
60/226,076 17 August 2000 (17.08.2000) US  
60/234,539 22 September 2000 (22.09.2000) US

(71) Applicants (for all designated States except US): ELI  
LILLY AND COMPANY [US/US]; Lilly Corporate  
Center, Indianapolis, IN 46285 (US). WANG, Qiuping  
[US/US]; 8430 Harrison Parkway, Fishers, IN 46038 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): BONJOUKLIAN,  
Rosanne [US/US]; 318 Dominion Drive, Zionsville, IN  
46077 (US). COHEN, Jeffrey, Daniel [US/US]; 1411  
Shawnee Road, Indianapolis, IN 46260 (US). GRU-  
BER, Joseph, Michael [US/US]; 9272 Shady Bend,  
Brownsburg, IN 46112 (US). JOHNSON, Douglas,  
Webb [US/US]; 235 Saddlebrook Court, Zionsville, IN  
46077 (US). JUNGHEIM, Louis, Nikolaus [US/US];  
8218 Meadowbrook Drive, Indianapolis, IN 46240 (US).  
KROIN, Julian, Stanley [US/US]; 8418 Hilltop Drive,  
Indianapolis, IN 46234 (US). LANDER, Peter, Ambrose  
[US/US]; 5407 North Capitol Avenue, Indianapolis, IN  
46208 (US). LIN, Ho-Shen [US/US]; 8128 Trevellian  
Way, Indianapolis, IN 46217 (US). LOHMAN, Mark,  
Christopher [US/US]; 1307 Baker Street, Apartment C,

Longmont, CO 80501 (US). MUEHL, Brian, Stephen  
[US/US]; 940 Country Lane, Indianapolis, IN 46217  
(US). NORMAN, Bryan, Hurst [US/US]; 8648 Admi-  
rals Bay Drive, Indianapolis, IN 46236 (US). PATEL,  
Vinod, Francis [US/US]; 3 Mossy Lane, Bellows Farm,  
Acton, MA 01720 (US). RICHETT, Michael, Enrico  
[US/US]; 5832 Baron Court, Indianapolis, IN 46250 (US).  
THRASHER, Kenneth, Jeff [US/US]; 8660 Count Turf  
Court, Indianapolis, IN 46217 (US). VEPACHEDU,  
Sreenivasarao [IN/US]; 16 West 630 Mockingbird Lane,  
Apartment 20G, Hinsdale, IL 60521 (US). WHITE,  
Wesley, Todd [US/US]; 1434 Grube Street, Indianapolis,  
IN 46227 (US). XIE, Yongping [CN/US]; 19 Hunting-  
ton Circle, Apartment 15, Naperville, IL 60540 (US).  
YORK, Jeremy, Schulenburg [US/US]; 3592 North  
Tillotson Avenue, Number 87, Muncie, IN 47304 (US).  
PARKHURST, Brandon, Lee [US/US]; 144 Jonquill  
Drive, Indianapolis, IN 46227 (US).

(74) Agents: DAWALT, Elizabeth, A. et al.; Eli Lilly and Com-  
pany, Lilly Corporate Center, Indianapolis, IN 46285 (US).

(81) Designated States (national): AE, AG, AL, AM, AT, AU,  
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ,  
DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,  
HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,  
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,  
NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM,  
TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

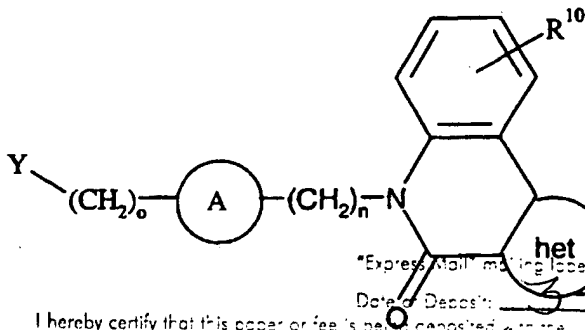
(84) Designated States (regional): ARIPO patent (GH, GM,  
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian  
patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European  
patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE,  
IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF,  
CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:

— With international search report.

[Continued on next page]

(54) Title: METHODS AND COMPOUNDS FOR INHIBITING MRP1



(57) Abstract: The present invention  
further relates to a method of inhibiting  
MRP1 in a mammal which comprises  
administering to a mammal in need  
thereof an effective amount of a  
compound of formula (I).

WO 01/46199 A1

I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 C.F.R. 110 on the date indicated above and is addressed to the Commissioner for  
Patent, P.O. Box 1450, Alexandria, VA 22313-1450

(Typed or Printed name of person mailing paper)

(Signature of person mailing paper or fee)



— Before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments.

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.